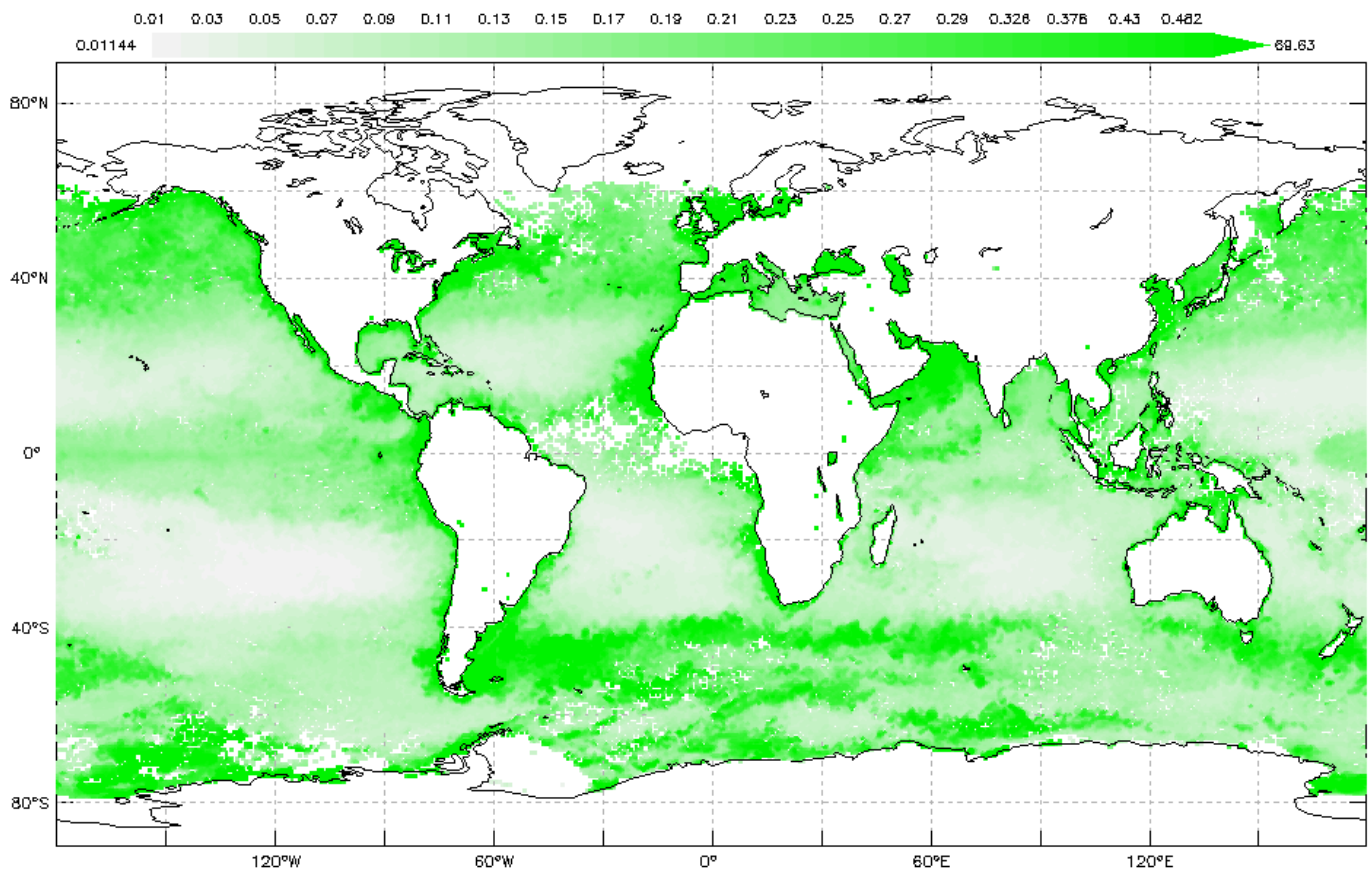



## My NASA Data - Mini Lesson

### Seasonal Chlorophyll Concentrations

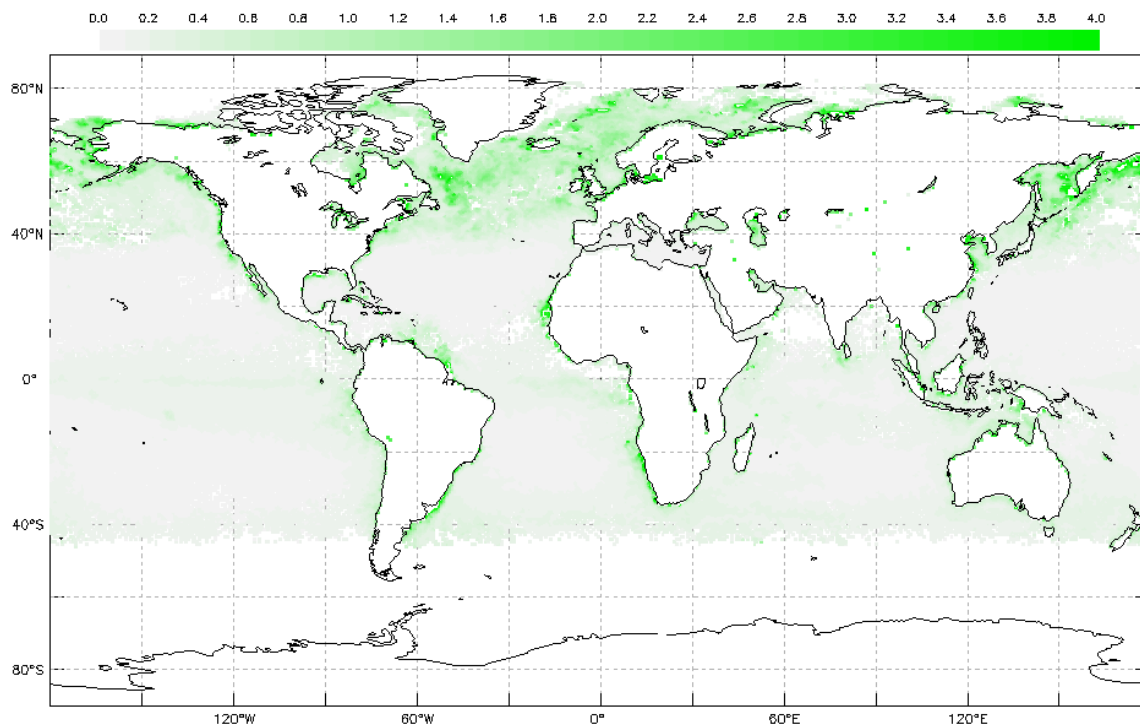


### Mini Lesson

**Virtual Teachers:** Make a copy of the  Google Form of your choice so that you may assign it directly from your Google Drive into your Learning Management System (e.g., Google Classroom, Canvas, Schoology, etc.). Do you need help incorporating these Google Forms into your Learning

Management System? If so, read this  [Guide to Using Google Forms with My NASA Data.](#)

**Directions:** Student will observe maps of monthly seasonal chlorophyll concentrations in our global oceans and match to four different months of 2017. These maps will be offered in the Google Slide deck or in handouts provided by your teacher.



1. The chlorophyll maps (Images A-D) were created to represent the following time periods: February 2017, June 2017, October 2017, and December 2017 but are not in order. Match the maps with their corresponding months from 2017 based on your observations. For example, Map X = February 2017, etc.
2. Identify the seasonal cycles for chlorophyll concentrations throughout the year by answering the following questions:
  1. What changes do you see through the year? What explanations can you suggest for these patterns?
  2. Choose a location or region. During which months do the extreme highs and lows occur? What explanations can you suggest for the timing of those extremes?
  3. Which regions experience both the extreme highs and lows? Which regions don't experience the extremes? Why do you think this happens?
  4. What differences, if any, do you find between the year's variations over the coastal versus the year's variations over the open oceans?
  5. Are there regions that remained relatively unchanged over the year? Why do you think this happens?

Teachers who are interested in receiving the answer key, please contact MND from your school email address at [larc-mynasadata@mail.nasa.gov](mailto:larc-mynasadata@mail.nasa.gov).

## Earth System Data Explorer

- [Chlorophyll Concentration](#)